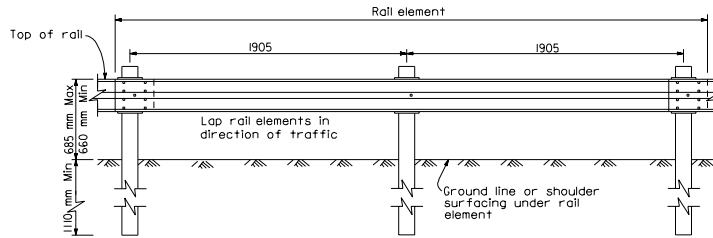
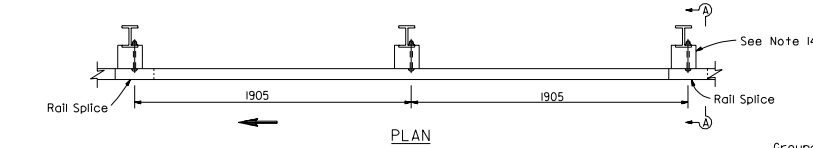




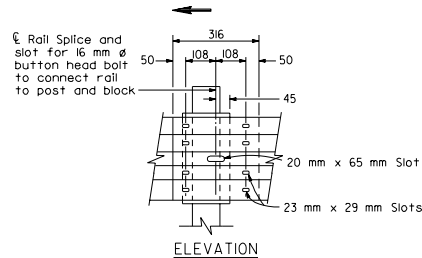
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL, PROJECT	SHEET TOTAL NO. SHEETS

REGISTERED CIVIL ENGINEER  
 July 1, 1999  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL PEER REVIEW  
 ELLIS & HIGGINS  
 No. C17926  
 Exp. 8-30-01  
 CIVIL  
 STATE OF CALIFORNIA

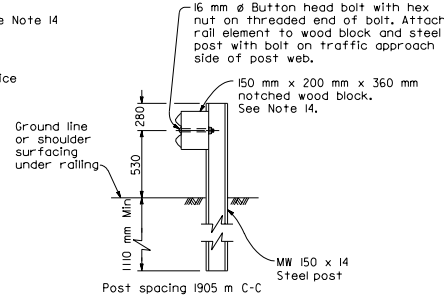


**METAL BEAM GUARD RAILING WITH STEEL POSTS AND WOOD BLOCKS**



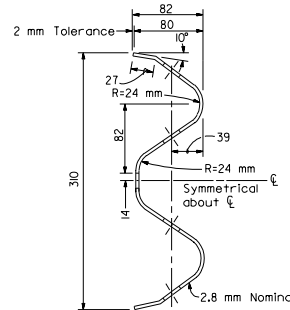
**RAIL ELEMENT SPLICE DETAIL**

Connect the overlapped ends of the rail elements with 16 mm  $\phi$  x 35 mm button head oval shoulder bolts inserted into the 23 mm x 29 mm slots and bolted together with 16 mm  $\phi$  x 35 mm recessed hex nuts. A total of 8 bolts and nuts are to be used at each rail splice connection. The ends of the rail elements are to be overlapped in the direction of traffic (see details). Where a terminal section or end section is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



**TYPICAL STEEL LINE POST INSTALLATION**

See Note 4



## NOTES

- For details of wood post and wood block installations, see Standard Plan A77A.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B.
- For details of steel posts and wood blocks used to construct guard railing, see Standard Plan A77CA.
- For additional installation details, see Standard Plan A77FA.
- Guard railing post spacing to be 1905 mm center to center, except as otherwise noted.
- For guard railing typical layouts, see Standard Plans A77D and A77E.
- For embankment widening details to accommodate guard railing terminal system end treatments, see Standard Plan A77F.
- For typical terminal system end treatments, see Standard Plans A77L, A77M and A77N. For type of terminal system to be used, see Project Plans.
- For guard railing terminal anchor details, see Standard Plans A77G, A77H and A77IA.
- For guard railing connection details to bridge railing, retaining walls and abutments, see Standard Plan A77J.
- For guard railing connection details to bridge sidewalks and curbs, see Standard Plan A77K.
- For dike positioning with guard railing installations, see Standard Plan A77F.
- Direction of traffic indicated by  $\rightarrow$ .
- Notched face of wood block faces steel post.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## METAL BEAM GUARD RAILING TYPICAL STEEL POST WITH WOOD BLOCK

NO SCALE

ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

**A77AA**

1999 STD. PLAN A77AA